

REMARKS

Claims 1-12 are pending in this application, with claims 1 and 5 being independent. For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art.

Claim Rejections – 35 U.S.C. § 112

Claims 1, 2, 5, and 10 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. With respect to claims 1, 2, and 5, the Office Action asserts that the term “strength” is too broad and makes the claim indefinite. For example, the Office Action asserts that the limitation of “strength profile of a polarity of radio waves” is unclear and can be understood to cover any type of strength between radio waves, such as the interference between waves. Therefore, the Office Action suggests amending the claims to recite “signal strength.” See e.g., Office Action dated September 17, 2008 at page 3. Although Applicants disagree, Applicants have amended claims 1, 2, and 5 to recite “signal strength” to expedite prosecution of this case.

Claim Rejections – 35 U.S.C. § 103

Claims 1-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication Number 2002/0111191 (“Takatori”) in view of U.S. Patent Number 5,513263 (“White”). Claims 11 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takatori, in view White, and further in view of U.S. Patent Number 5,222,137 (“Barrett”). Applicants traverse these rejections for at least the following reasons.

Takatori and White, either alone or in combination, fail to describe or suggest a radio communications system that includes, among other features, first and second radio devices

mutually transmitting and receiving a radio wave through a radio transmission path via only said first and second antennas, wherein: (i) said first radio device receives a radio wave or waves from said second radio device while changing a directivity of said first antenna with prescribed patterns to form a plurality of directivities, generates a first receive signal profile indicative of a signal strength of a plurality of radio waves received with the respective ones of the directivities, and generates a first private key based on the generated first receive signal profile; and (ii) said second radio device receives a radio wave or waves from said first radio device while changing a directivity of said first antenna with prescribed patterns to form a plurality of directivities, generates a second receive signal profile indicative of a signal strength of a plurality of radio waves received with the respective ones of the directivities, and generates a second private key identical to said first private key based on the generated second receive signal profile, as recited in proposed amended claim 1.

The Office Action asserts that

“although Takatori does not specifically state changing the directivities with prescribed patterns, it does state changing the directivity based upon a weight vector. The weight vector is based on the signal interference [strength profile of a plurality of radio waves]. As the signal interference changes, the weight vector and thus the directivity will change. Different interferences will result in different weight vectors and different directivities.”

The Office Action at page 3. Even assuming *arguendo* that the Examiner’s assertion is correct, Takatori still does not generate a first receive signal **profile** indicative of signal strength of a plurality of radio waves received with the respective ones of the directivities and to generate a second receive signal **profile** indicative of a signal strength of a plurality of radio waves received with the respective ones of the directivities, as recited in claim 1. Furthermore, as the Office Action concedes, the alleged strength profile is based on the strength of the *interference between*

the signals received from terminal stations 101A, 101B and is not based on the *signal strength of a plurality of radio waves received* with the respective ones of the directivities.

Notwithstanding the above and to distinguish the cited prior art further, Applicants have amended claim 1 to recite a radio communications system that includes, among other features, first and second radio devices mutually transmitting and receiving a radio wave through a radio transmission path via only said first and second antennas. The Office Action asserts that the two base stations in Takatori correspond to the first and second radio devices. *See e.g.*, Office Action at page 5. The Office Action also states that the base stations can receive and transmit “radio wave signals” from/to the other base stations through many terminal stations. *See e.g.*, Office Action at page 6. In contrast, the first and second radio devices transmit and receive a radio wave through a radio transmission path via only said first and second antennas, as recited in claim 1.

For at least the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 1.

Claim 5 includes features similar to the above-recited features of claim 1. Therefore, for at least the reasons presented above with respect to claim 1, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 5.

Dependent Claims

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Because claims 1 and 5 are allowable for the reasons set

forth above, it is respectfully submitted that all claims dependent thereon are also allowable. In addition, it is respectfully submitted that the dependent claims are allowable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Therefore, it is respectfully requested that the rejection under § 103 be withdrawn.

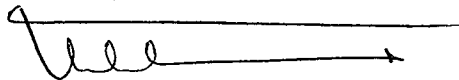
Conclusion

Having fully responded to all matters raised in the Office Action, Applicant submits that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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